ALS Advanced Airway Management

AUTHORITY: Division 2.5, Health and Safety Code, Sections 1797.220 & 1798 et seq.

DEFINITIONS:

A. “Oral Tracheal Intubation (OTI) Attempt” means the introduction of a laryngoscope blade Endotracheal Tube Inducer (ETTI) or Endotracheal Tube past the patient’s teeth, with the intent to intubate.

B. “Difficulty Airway” means an airway that has been predicted to be difficult based on preassessment of the patient or upon an attempt to visualize the cords and the patient has a Cormack-Lehane grade of three (3) of four (4).

C. “Successful OTI Attempt” means a verified placement and securing of the endotracheal tube into the patient’s trachea.

D. “Successful OTI Attempt with Complications” means a verified placement and securing of the endotracheal tube into the patient’s trachea with any of the following:

1. Failure to perform and document meticulous BLS airway management skills prior to ALS intervention, as well as justification for ALS airway.
2. Failure to maintain continuous pulse oximetry and ECG monitoring, for at least one (1) minute before the attempt and continuously thereafter.
3. Deviations in vital signs associated with intubation suggestive of prolonged hypoxia, such as bradycardia or desaturation.
4. Subsequent dislodgement of the endotracheal tube recognized by the receiving hospital.
5. Subsequent diagnosis of mainstem intubation recognized by the receiving hospital.
6. Subsequent diagnosis of severe airway complications likely associated with the prehospital intubation, such as pharyngeal, esophageal perforation, laryngeal trauma, such as vocal cord paralysis, or aspiration pneumonia.

POLICY:

I. The approved airway management procedure for the unconscious adult patient consists of the following: providing BLS airway management skills; correctly assessing the need for an advanced airway; and successfully inserting either an endotracheal tube via oral tracheal intubation, and if not successful, insertion of a or a King Airway.

II. Paramedics placing advanced airways shall follow the procedures specified in EMS Policies No. 2545, 2552, 2553, 2555, and 2556.
III. **EndoOral** tracheal intubation in the pediatric patient should only be performed if unable to ventilate and oxygenate the patient using two-person Bag/Valve/Mask (BVM) ventilation. In cardiac arrest, oximetry will not be accurate, so intubation in this case should only occur if the patient cannot be ventilated by BVM.

IV. Do not delay transport to establish an advanced airway in trauma patients except in the case of complete airway obstruction, as evidenced by a complete inability to ventilate the patient using an Oral Pharyngeal Airway (OPA) and BVM device.

V. If unable to establish an airway due to complete airway obstruction not relieved using an OPA and BVM maneuvers, begin code three transport, and consider insertion of a King Airway, or needle cricothyrotomy (EMS Policy No. 2549) if the King Airway does not result in successful ventilation. Do not delay transport to wait for the arrival of an air ambulance.

VI. INDICATIONS FOR INTUBATION:

   A. Inability of the patient to protect their airway (coma, decreased level of consciousness with non-intact gag reflex).
   B. Inability to adequately ventilate or oxygenate the patient using an OPA and BVM device.
   C. Cardiac arrest, including traumatic arrest.
   D. Failing respirations (irregular and shallow), respiratory arrest.

VII. CONFIRMATION OF TUBE PLACEMENT:

   A. Paramedics shall ensure that all intubations are confirmed by end tidal CO\textsubscript{2} device (colorimetric or capnography) and/or esophageal detection device (EDD) *(EDD not used for King Airway)*.
   B. Paramedics shall immediately confirm tube placement by auscultating bilateral lung fields for breath sounds, observe for chest rise and fall with ventilations, and listen for air flow into the epigastric area after placement of an endotracheal tube or rescue device King Airway.
   C. Paramedics shall continually monitor capnography readings on all patients who have an endotracheal tube or King Airway airway in place. Monitoring shall commence with transport and shall continue through to patient transfer at the emergency department.
   D. Paramedics shall attach a copy of the capnography strip and document the readings on the patient care record.
   E. Paramedics shall reconfirm ET Tube placement prior to transferring patient care.
   F. Paramedics shall visualize the pharynx and vocal cords with the laryngoscope, if there is any doubt as to proper placement of the endotracheal tube.

VIII. INDICATIONS FOR KING AIRWAY

   A. Select King Airway directly upon assessing a Cormack-Lehane grade of 3 or 4 or
   B. Select a King Airway directly in response to other physical or physiological

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Approved: 
Medical Director
EMS Administrator
impediments to the successful insertion of an endotracheal tube or.

G.C. Select a King Airway after two unsuccessful attempts to insert an endotracheal tube.

VIII. IX. APPROVED ADVANCED AIRWAY PROCEDURE:

A. Prepare equipment and position patient with the intent to provide an airway via either an Endotracheal Tube or via a King Airway Endotracheal Intubation:

A.B. Upon a determination that the patient has a Cormack-Lehane grade of one (1) or two (2), attempt to insert and endotracheal tube as described in EMS Policy No. 2545 – Endotracheal Intubation – Adult.

1. No more than two (2) attempts per patient with preoxygenation and continuous oximetry monitoring prior to each attempt.

2. After two (2) unsuccessful attempts at endotracheal intubation, insert a King Airway as described in EMS Policy No. 2552 – King Airway.

3. An endotracheal tube inducer (ETTI) shall be used on all attempts.

4. Each attempt should last no longer than thirty (30) seconds. If during any attempt patient desaturates below 90%, immediately cease and reventilate to increase saturation.

5. Ventilate with 100% oxygen for one (1) minute prior to attempting to intubate.


B.C. Upon a determination the patient has a Cormack-Lehan grade of three (3) or four (4), continue providing BLS resuscitation, and provide a King Airway as described in EMS Policy No. 2552 – King Airway.

1. A patient with a Cormack-Lehane grade of three (3) or four (4) (epiglottis is not or is barely visible) will be considered to have a difficult airway. The King Airway shall be utilized on the first attempts for difficult airways in adult patients.

2. Only King Airway sizes three (3), four (4), and five (5) are authorized for use.

3. The King Airway is not authorized for use in adults < 4 feet tall.

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<tr>
<th>Cormack and Lehan Classification (Grades) of Difficult Laryngoscopy</th>
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<tbody>
<tr>
<td>Grade I Most of glottis is seen</td>
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<tr>
<td>Grade II Only posterior portion of glottis can be seen</td>
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<tr>
<td>Grade III Only epiglottis may be seen (none of glottis seen)</td>
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<tr>
<td>Grade IV Neither epiglottis nor glottis can be seen</td>
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<thead>
<tr>
<th>Authorized King Airway Sizes</th>
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<tbody>
<tr>
<td>Size</td>
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4. Use a laryngoscope to facilitate placement.
5. Do not exceed manufacture’s recommended pressures.
6. Remove and replace the King Airway if resistance is met upon initial insertion.
6-7. After two (2) unsuccessful attempts, place a BLS airway and transport code 3 to the closest receiving hospital.

C. D. E. Nasal Intubation: Nasal tracheal intubation may only be performed with a Base Hospital Physician order. The Base Hospital Physician’s name shall be documented on the PCR.